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26 August 1993

AGREEMENT

CONCERNING THE ADOPTION OF UNIFORM CONDITIONS OF APPROVAL AND RECIPROCAL RECOGNITION OF APPROVAL FOR MOTOR VEHICLE EQUIPMENT AND PARTS

done at Geneva on 20 March 1958

Addendum 64: Regulation No. 65

Amendment 1

Supplement 1 to this Regulation in its original form
Date of entry into force: 24 August 1993

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF SPECIAL WARNING LAMPS FOR MOTOR VEHICLES

UNITED NATIONS

Amend the title of the Regulation to read:

"UNIFORM PROVISIONS CONCERNING THE APPROVAL OF SPECIAL WARNING LAMPS FOR MOTOR VEHICLES"

General amendments

(i) In paragraphs 2.2., 3.1., 4.1. to 4.3., 4.6., 5.2., 9. and 10.1., amend the word "light" to read "special warning lamp."

(ii) In paragraphs 2.2.4. and 6., amend the word "lights" to read "special warning lamps."

Amend the list of Contents to read:

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7. Checking the colour of the special warning lamp ....
8. Modification of a type of special warning lamp for motor vehicles and extension of approval....
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.
.
12. Special provision
13. Names and addresses of technical services ...

ANNEXES

Annex 1 - Communication concerning the approval or refusal or extension or withdrawal of approval or production definitely discontinued of a type of special warning lamp for motor vehicles, pursuant to Regulation No. 65

Annex 2 - Arrangement of the approval mark

Annex 3 - Trichromatic co-ordinates for the light emitted through the amber or blue filters constituting the covers of special warning lamps

Annex 4 - Procedure for the rain test

Annex 5 - Photometric specifications

Annex 6 - Xenon relative spectral distribution"

Paragraphs 1.1. and 1.2., amend to read:

"1.1. 'Special warning lamp' means a lamp emitting light intermittently all around on its vertical axis,

1.2. Special warning lamps of different 'types' mean special warning lamps which differ intrinsically in such matters as:"

Paragraph 1.2.7., amend to read:

"1.2.7. whether the special warning lamp has one level (class 1) or two levels (class 2) of intensity,"

Add a new paragraph 1.3., to read:

"1.3. the frequency f is the number of flashes or groups of flashes (see annex 5, para. 5) within one second,"

Paragraph 1.3. (former), renumber as "1.4." and amend the symbol "J_{max}" to read "J_m."

Add a new paragraph 1.5., to read:

"1.5. the 'off' time t_D means the period of time within which the luminous intensity of the flashing light is less than 1/100 of the maximum value (peak value) J_m, but not more than 10 cd. In the case of groups of flashes the 'off' time shall be evaluated from the last flash of the group to the first flash of the next group;"

Paragraph 1.4. (former), renumber as "1.6."

Paragraph 1.5. (former), renumber as "1.7." and amend to read:

"1.7. 'reference centre of the special warning lamp' means the centre of the light-emitting source;"

Paragraph 1.6. (former), renumber as "1.8." and amend to read:

"1.8. 'reference axis of the special warning lamp' means an axis vertical to the road passing through the reference centre of the lamp. The manufacturer of the special warning lamp shall indicate the position of the special warning lamp in relation to the reference axis;"

Paragraph 1.7. (former), renumber as "1.9." and amend the word "lamp" to read "special warning lamp."

Paragraph 1.7.1. (former), renumber as 1.9.1. and amend the word "light" to read "special warning lamp."

Paragraph 1.7.2. (former), renumber as 1.9.2.

Paragraph 2.1., amend to read:

"2.1. The application for approval of a special warning lamp shall be submitted by the owner of the trade name or mark or by his duly accredited representative. It shall specify whether the special warning lamp is intended to emit amber (A) or blue (B) light, and whether it has one level of intensity (class 1) or two levels of intensity (class 2)."

Paragraph 2.2.1., amend the word "warning lamp" to read "special warning lamp" (twice).

Paragraph 2.2.2., amend to read:

"2.2.2. a brief technical description stating in particular the category of the filament lamp provided; this category shall be either one of those recommended in the list of internationally standardized motor vehilcle filament lamps, according to Regulation No. 37 annexed to the 1958 Agreement, or a discharge lamp provided by the manufacturer of the special warning lamp,"

Paragraph 2.2.3., amend to read:

"2.2.3. for a special warning lamp having two levels of intensity, an arrangement diagram and a specification of the characteristics of the system ensuring two levels of intensity,"

Paragraph 2.2.5., replace by the following text:

"2.2.5. two samples of the cover, provided that the construction of the special warning lamp with exception of the colour of the cover remains unchanged and the approval may be extended simultaneously or subsequently for special warning lamps of another colour. In this case, it is sufficient to carry out the photometric and colorimetric tests."

Paragraphs 3.2. and 3.3., replace by the following text:

"3.2. Each base, each cover and any external components of a special warning lamp which are necessary for its required performance shall include a space of sufficient size for the approval marking, these spaces shall be shown in the drawings mentioned in paragraph 2.2.1. above.

3.3. Each special warning lamp shall be marked, clearly legible and indelible, with the rated voltage of the special warning lamp and, in the case of a removable light source, with the indication of its category related to the relevant ECE Regulation."

Paragraph 4.4., amend to read:

"4.4. Every special warning lamp conforming to a special warning lamp approved under this Regulation shall bear, in the spaces referred to ...."

Footnote 1/, pertinent to paragraph 4.4.1.1., amend to read:

"1/ 1 for Germany, ... 8 for the Czech Republic, ..., 15 (vacant), ... 22 for the Russian Federation, 23 for Greece, 24, 25 (vacant), 26 for Slovenia. Subsequent ..."

Add a new paragraph 4.4.1.3., to read:

"4.4.1.3. 'A' or 'B' according to the colour of the unit (see para. 2.1.)."

Paragraph 4.4.1.3. (former), renumber as 4.4.1.4. and amend the symbols "A" and "B" to read "1" and "2" respectively.

Paragraph 4.5., replace by the following text:

"4.5. The base, the cover and any external components of the special warning lamp referred to in paragraph 3.2. may bear one or more additional approval marks."

Paragraph 5.1., amend to read:

"5.1. The special warning lamps must be so designed ... by this Regulation.

The special warning lamps must be so designed and constructed that the relevant requirements with regard to voltage higher than 50 V are fulfilled."

Paragraphs 5.3. and 5.4., replace by the following text:

"5.3. When a discharge lamp type is used it should be permanently fixed to the special warning lamp. In the case of a removable discharge lamp the special warning lamp and the used discharge lamp shall be accurately designed by the manufacturer in such a way that it is not possible to use a wrong type of discharge lamp in the said special warning lamp, nor to mount the correct discharge lamp in a wrong way; in this case the discharge lamp shall be marked with the indication of its category related to the relevant ECE Regulation respectively if there is no ECE Regulation for the discharge lamp with the approval mark of the special warning lamp.

5.4. The frequency f, the 'on' time t_H and the 'off' time t_D shall correspond to the values indicated in the table in annex 5 to this Regulation. They shall be measured at an ambient temperature of + 23° C ± 5° C and with voltages at the terminals of the device which are between 90 per cent and 115 per cent of the rated voltage. Moreover, starting and correct functioning of the special warning lamp shall remain assured at temperatures between - 20° C and + 50° C or if the special warning lamp is exposed to heavy rain, in accordance with the procedure described in annex 4 to this Regulation. Under those conditions, one minute after a voltage equal to 90 per cent of the rated voltage has been applied, the frequency shall remain between 2 and 4 Hz."

Paragraph 7., replace by the following text:

"7. CHECKING THE COLOUR OF THE SPECIAL WARNING LAMP

The colorimetric characteristics of the light emitted, expressed in CIE chromaticity co-ordinates, shall be evaluated preferably using the luminous source as designed, working at nominal voltage.

As an alternative the chromaticity co-ordinates may be deduced from the spectral distribution of the transmission of the cover and the transmission or reflection of possibly existing other optical effective elements which could impair the colour of the special warning lamp. The calculation then shall be based on a luminous source having a colour temperature of 3,000 K in the case of a special warning lamp employing a filament lamp, or a luminous source with a relative spectral distribution as listed in annex 6 in the case of a special warning lamp employing a discharge lamp."

Paragraphs 8.1. and 8.1.1., amend the words "special warning light" to read "special warning lamp."

Paragraph 10.2., amend to read:

"10.2. If a Contracting Party to the 1958 Agreement applying this Regulation withdraws ... this Regulation, by means of a communication form conforming to the model in annex 1 to this Regulation."

Paragraph 11., amend to read:

" .. to manufacture a special warning lamp approved in accordance ... the other Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model in annex 1 to this Regulation."

Insert a new paragraph 12. to read:

"12. Special warning lamps approved before the introduction of this supplement without the category numbers '1' or '2' in their approval mark may be used also in future without time limitation."

Paragraph 12. (former), renumber as "13.".

Annex 1, amend to read:

"Annex 1

(Maximum format: A4 (210 x 297 mm))

COMMUNICATION

issued by: Name of administration:
.....
.....
.....

concerning: 2/ APPROVAL GRANTED
APPROVAL EXTENDED
APPROVAL REFUSED
APPROVAL WITHDRAWN
PRODUCTION DEFINITELY DISCONTINUED

of a type of special warning lamp for motor vehicles, pursuant to Regulation No. 65

Approval No.: ..... Extension No. .....

1. Special warning lamp blue/amber 2 .....

2. Special warning lamp has one/two levels of intensity 2.....

3. For special warning lamps having two levels of intensity, indicate the system used to obtain increased intensity at daytime .....

4. Used light source, discharge lamp or category of filament lamp .....

5. Rated voltage of special warning lamp .....

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18. The list of documents filed with the administration service which has granted approval and available on request is annexed to this communication.

1/ Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

2/ Strike out what does not apply."

Annex 2, in the figure giving the example of arrangement of the approval mark amend "A" to read "A1". Further, amend the caption below the figure, to read:

"The above approval mark affixed to a special warning lamp indicates ... requirements of the Regulation in its original form, has amber colour and is a class 'I' special warning lamp.

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Annex 3, amend to read:

"Annex 3

TRICHROMATIC CO-ORDINATES FOR THE LIGHT EMITTED THROUGH THE AMBER OR BLUE FILTERS CONSTITUTING THE COVERS OF SPECIAL WARNING LAMPS

Under the conditions of paragraph 7 of this Regulation, the trichromatic co-ordinates of light emitted through the filters used for special warning lamps shall lie within the following boundaries:

...."

Annex 4, in the first sentence amend the word "light" to read "special warning lamp" and delete the third subparagraph reading:

"In the case of turning lights ... 1.2.4. of this Regulation."

In the last sentence amend the volume quantity "2 cc" to read "2 cm^3".

Annex 5, paragraphs 1 to 3, replace by the following text

"1. Measurements of the photometric characteristics shall be taken at a distance of at least 25 m.

The angular diameter of the photoelectric receiver as seen from the special warning lamp shall be 10 minutes of arc maximum.

The response time of the photometric system shall be adequate to the rising time of the signal to be measured.

2. For special warning lamps having one level of intensity (class 1), the 'by night' level shall apply.

For special warning lamps having two levels of intensity (class 2), measurements shall be carried out for each of the two levels.

The effective luminous intensities in various directions shall be as specified in the table below.

3. If a filament lamp is used that shall be a standard filament lamp as provided for in Regulation No. 37 corresponding to a lamp of the category specified for the special warning lamp."

Paragraphs 5 and 6, replace by the following text:

"5. If the emitted light of a special warning lamp consists of groups of several flashes, the time distance Δ t between the immediately following flashes must be very short.

If the peak to peak distance Δ t is less or equal to 0.04 s, then the pulses in between are evaluated as one flash. If this distance Δ t is longer only the flash with the highest peak intensity is valid. Moreover, the distance is limited depending on the ratio between the peak intensities of the flashes within a group (I_H = max. intensity of the highest peak, I_L = max. intensity of the lowest peak) as follows:

in case $\frac{I_H}{I_L} > 10$ then $\Delta_t\ (s) \leq \frac{1}{3f}$

in case $1 \leq \frac{I_H}{I_L} \leq 10$ then $\Delta_t\ (s) \leq \frac{1}{f(5.5-0.25\ \frac{I_H}{I_L})}$

6. The effective luminous intensities, the frequency, the 'on' time and the 'off' time within the relevant vertical angles shall be as specified in the table below:

			Colour	
			blue	amber
Frequency f (Hz)	max.		4	
	min.		2	
"On" time t_H (s)	max.		$\frac{0.4}{f}$	
"Off" time t_D (s)	min.		0.1	
Minimum value of the effective luminous intensity J_e, within the specified vertical angles and a horizontal angle of 360° around the reference axis (cd)	0°	by day	105	230
		by night	42	100
	±4°	by day	55	-
		by night	22	-
	±8°	by day	-	168
		by night	-	67
Maximum value of the effective luminous intensity J_e, (cd)		by day	1 680	
		by night	670"	

Add new paragraphs 7 to 7.3., to read:

"7. If two or more optical systems are integrated in one special warning lamp, this unit has to comply with the following requirements:

7.1. Each optical system shall be in accordance with the requirements of this annex within the horizontal angle which is not covered by one of the other optical systems. Furthermore, in each required direction at least one optical system shall be effective corresponding to the requirements of this annex.

7.2. If a special warning lamp contains two or more optical systems, all the optical systems shall work in phase. This applies only to each half of a complete 'bar' which is designed to extend on the width of the vehicle.

7.3. As long as the efficiency of the special warning lamp is to be secured all around the car a detection of the failure of a part of a special warning system shall exist on the car. If it is designed by the special warning lamp manufacturer this detection shall be checked during the approval procedure."

Add a new annex 6 to read as follows:

"Annex 6

XENON RELATIVE SPECTRAL DISTRIBUTION

λ	S_e λ rel.	λ	S_e λ rel.	λ	S_e λ rel.	λ	S_e λ rel.
380	74.5	480	94.6	580	77.7	680	73.1
385	73.8	485	87.7	585	77.3	685	80.4
390	79.5	490	86.9	590	76.2	690	77.7
395	96.1	495	83.8	595	75.4	695	70.0
400	84.2	500	77.3	600	73.1	700	67.3
405	83.1	505	76.2	605	72.3	705	68.8
410	83.8	510	76.2	610	72.7	710	76.9
415	82.7	515	76.5	615	75.4	715	74.2
420	87.3	520	76.9	620	76.2	720	67.7
425	81.5	525	77.3	625	73.5	725	70.8
430	80.0	530	77.3	630	73.5	730	78.5
435	81.9	535	77.3	635	71.2	735	77.3
440	83.8	540	76.9	640	69.2	740	76.2
445	80.8	545	76.9	645	71.2	745	72.3
450	98.5	550	76.5	650	71.2	750	72.3
455	80.0	555	76.5	655	68.8	755	79.2
460	91.5	560	76.2	660	68.8	760	90.1
465	97.7	565	76.5	665	70.4	765	-
470	100.0	570	76.9	670	70.4	770	-
475	97.7	575	77.3	675	71.2	775	-"